OIPE
APR 2 2 2005
PATENT & TRADEMARK OFFICE
JC101

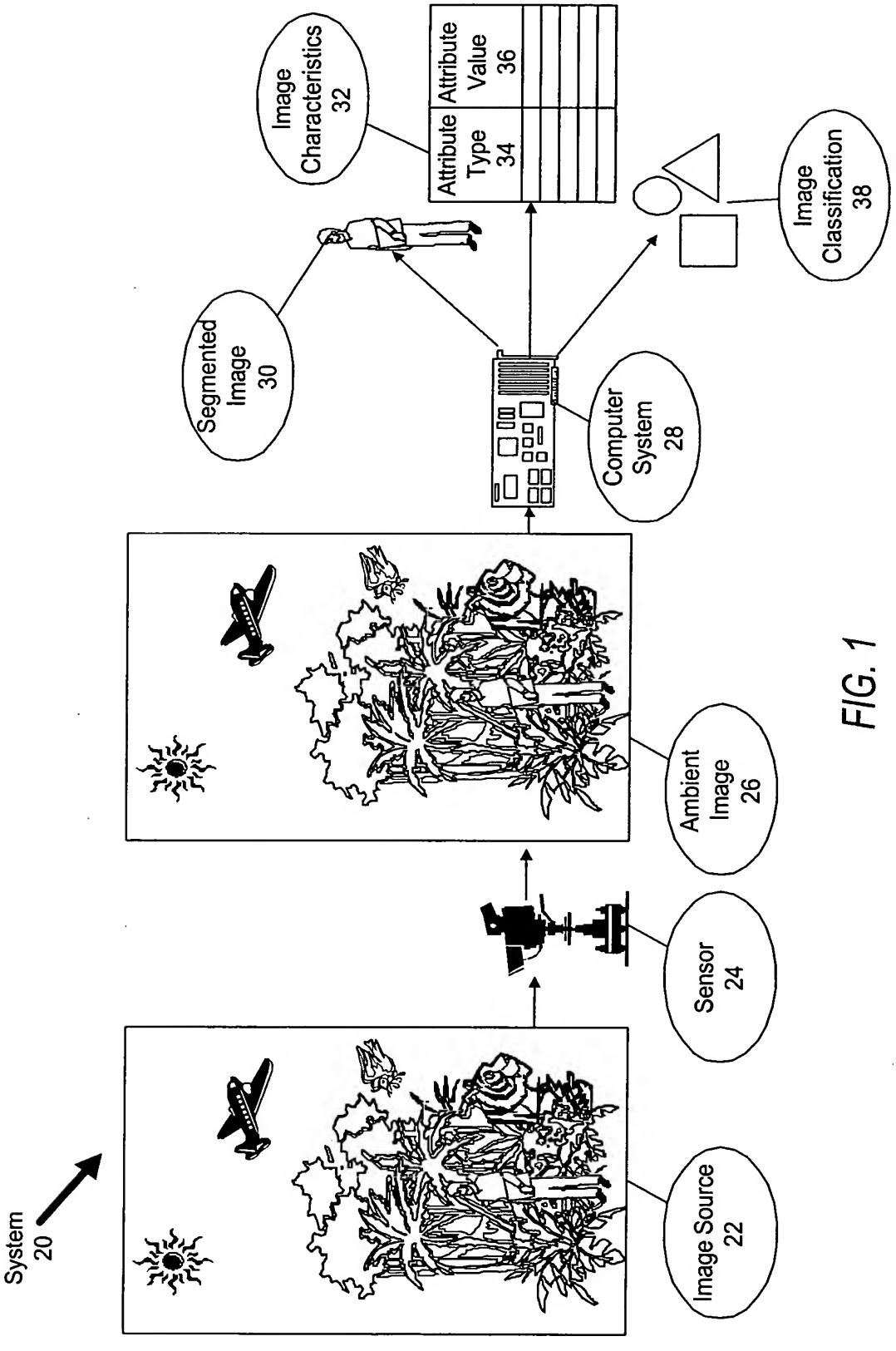

FIG. 1

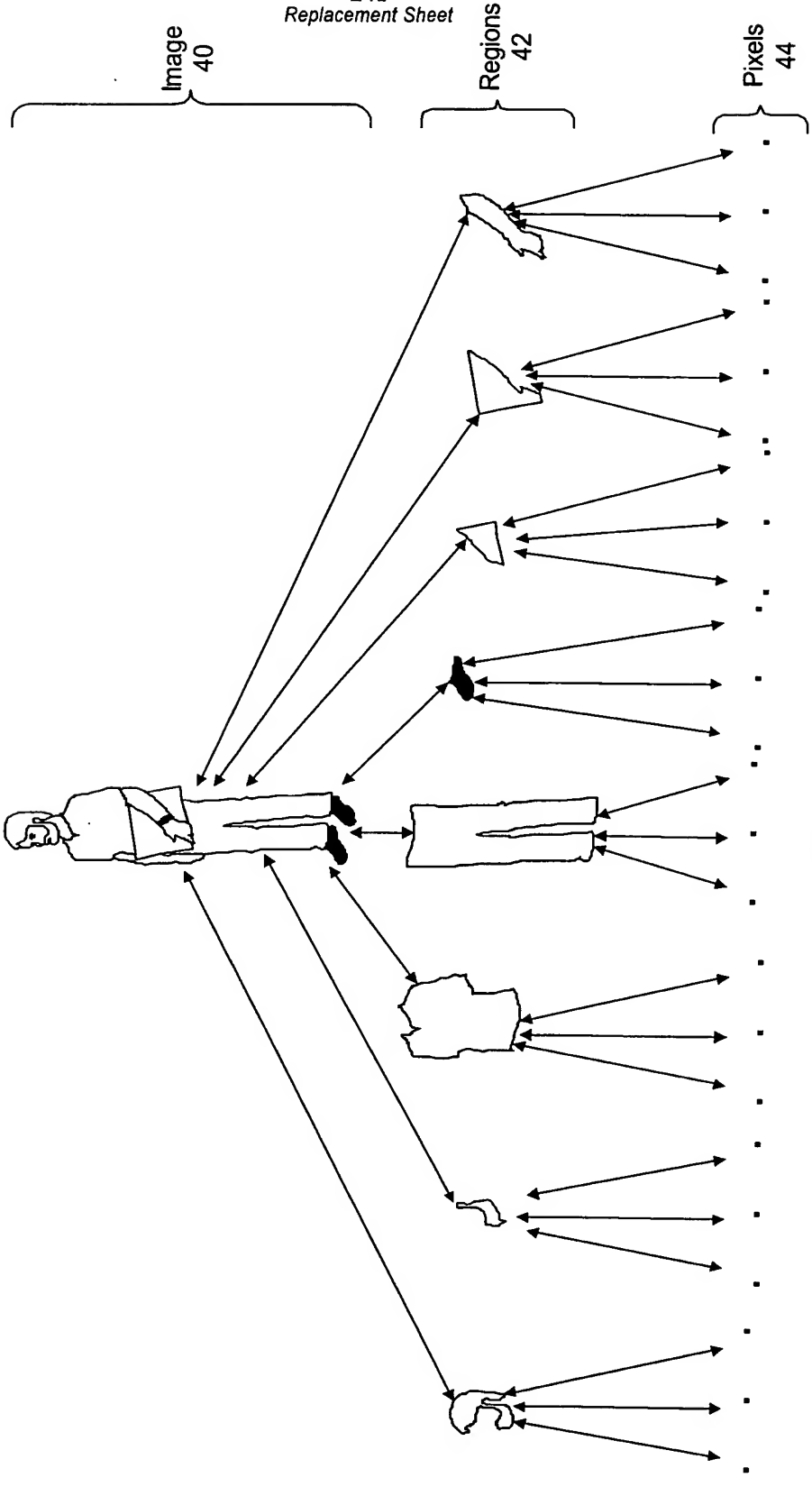

FIG. 2

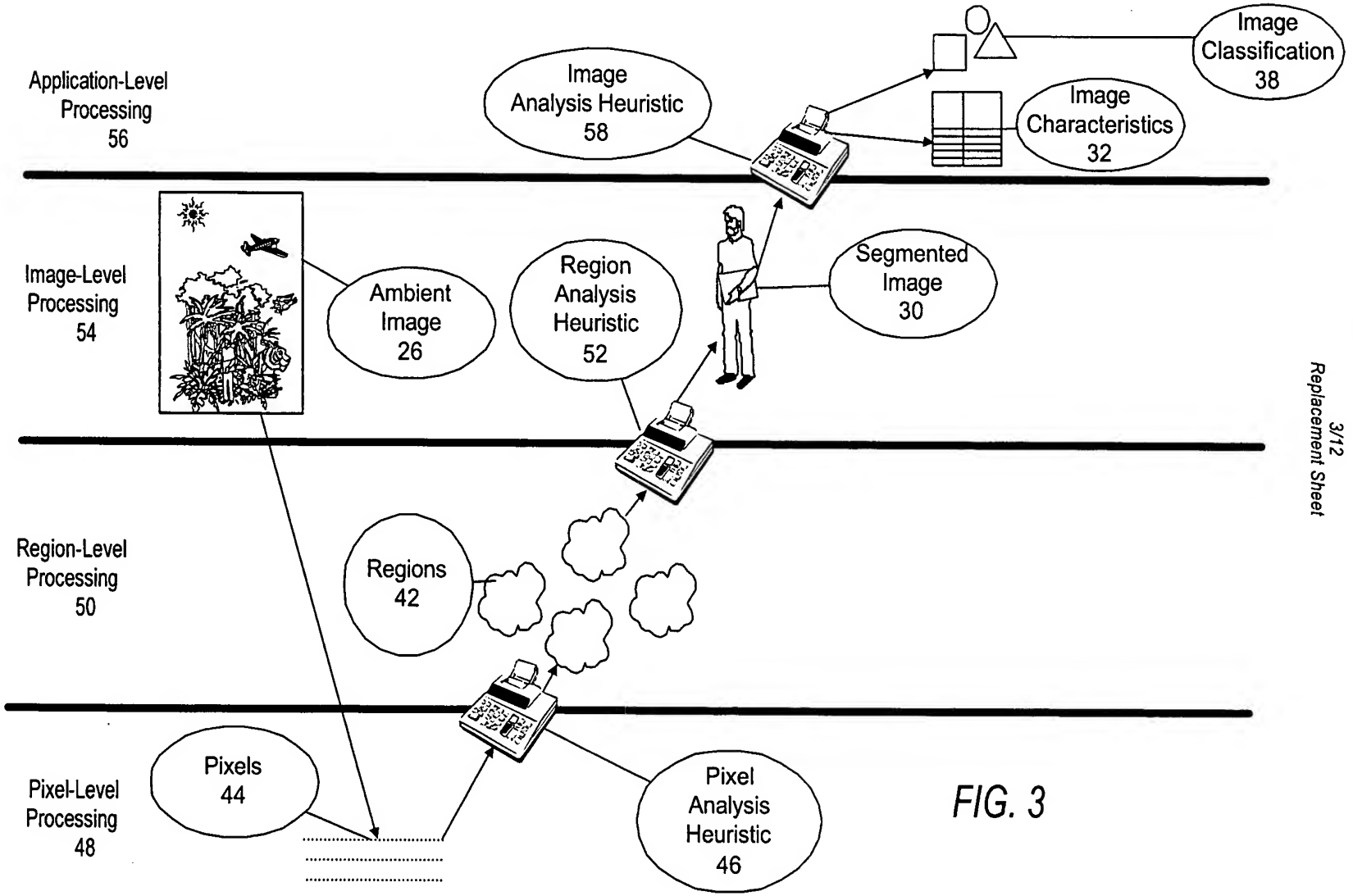

FIG. 3

First Named Inventor: Michael E. Farmer et al.
Title: Segment or Method For Segmenting Images
Atty. Docket No.: 65858-0018
Filed: 07/14/2003
Express Mail No. EL 970865873 US

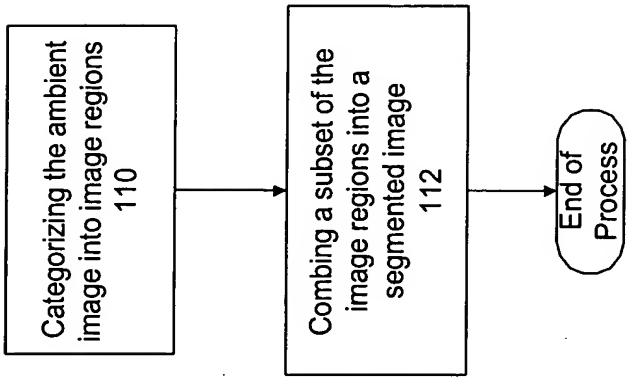

FIG. 5

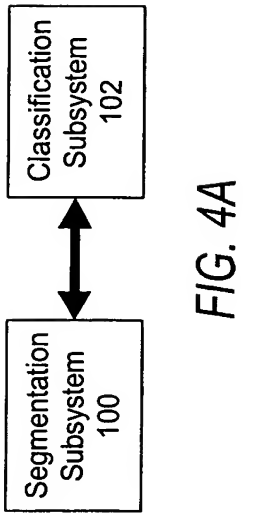

FIG. 4A

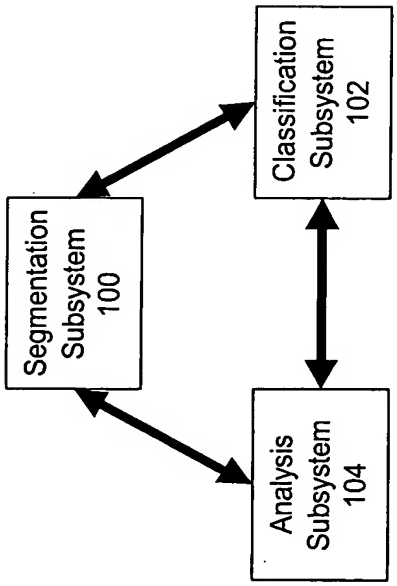

FIG. 4B

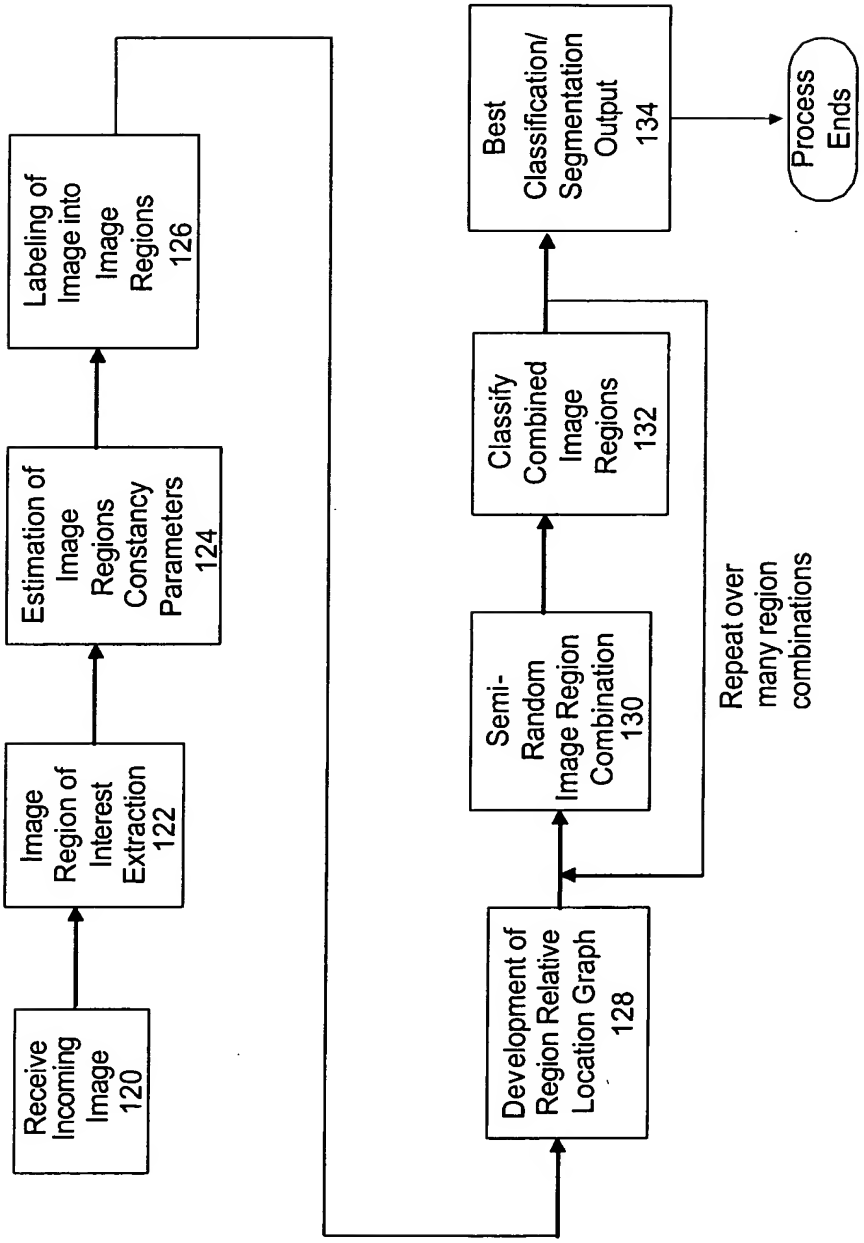
Receive Incoming Image 120
Image Region of Interest Extraction 122
Estimation of Image Regions Constancy Parameters 124
Labeling of Image into Image Regions 126
Development of Region Relative Location Graph 128
Semi-Random Image Region Combination 130
Classify Combined Image Regions 132
Best Classification/ Segmentation Output 134
Process Ends
Repeat over many region combinations

FIG. 6

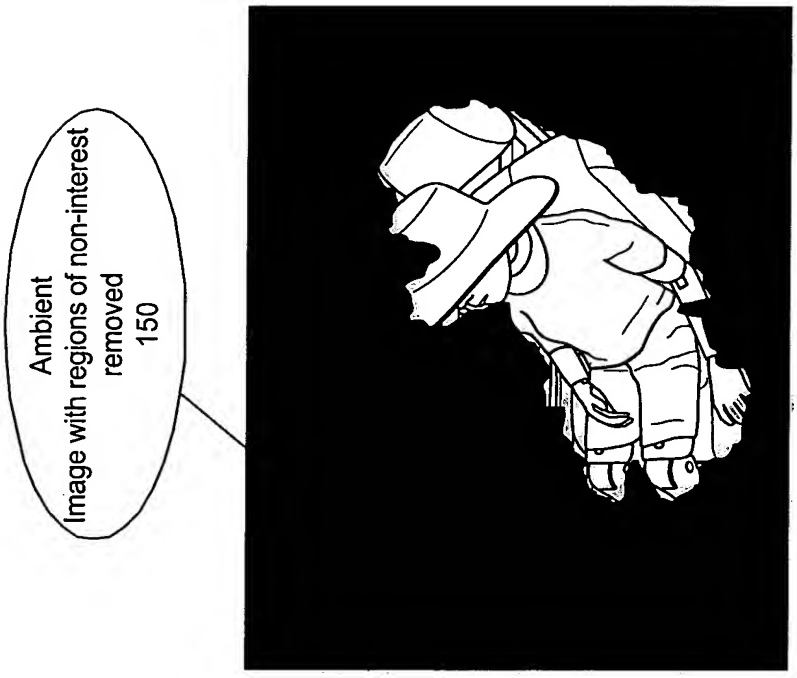
Ambient
Image with regions of non-interest
removed
150

FIG. 8

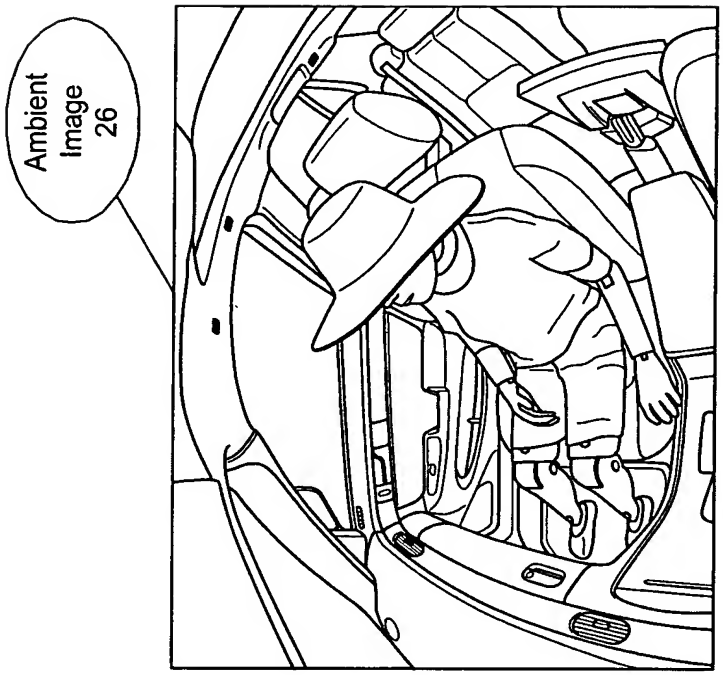
Ambient
Image
26

FIG. 7

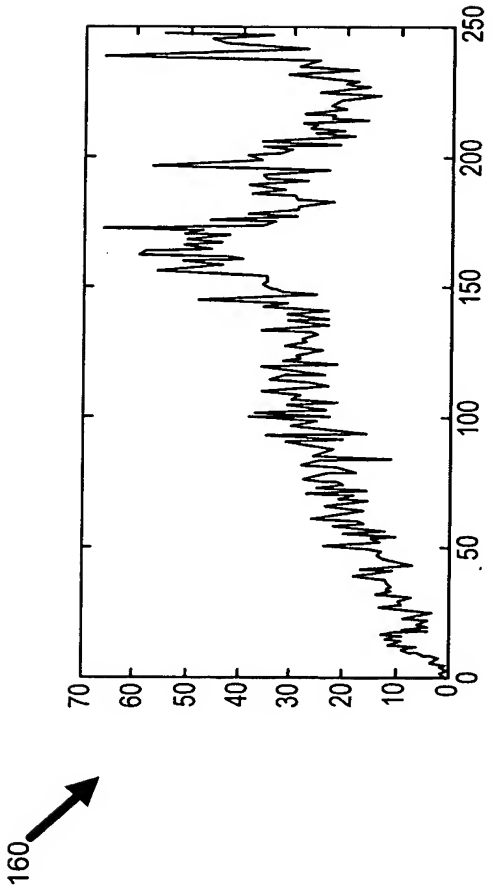
160
70
60
50
40
30
20
10
0
0
50
100
150
200
250

FIG. 9

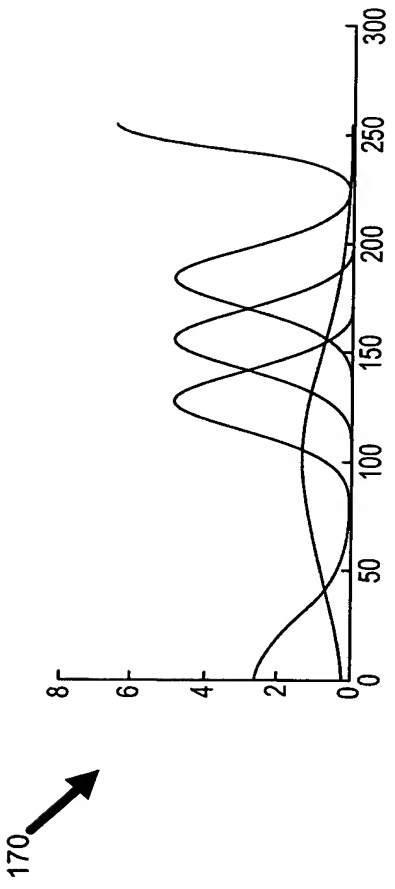
170
8
6
4
2
0
0
50
100
150
200
250
300

FIG. 10

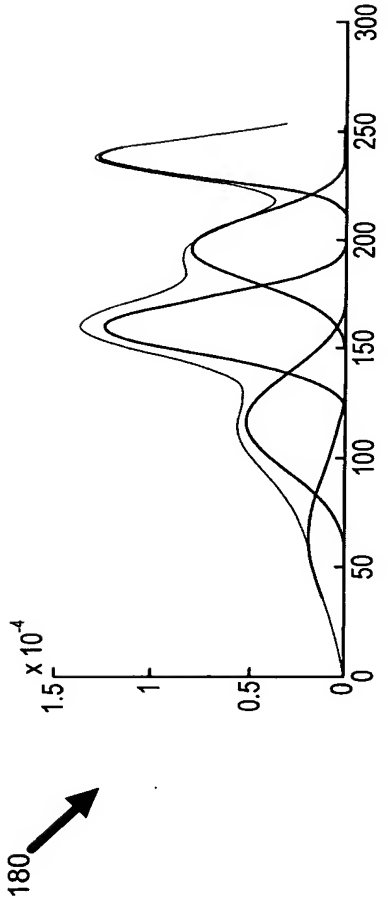
180
x 10^-4
1.5
1
0.5
0
0
50
100
150
200
250
300

FIG. 11

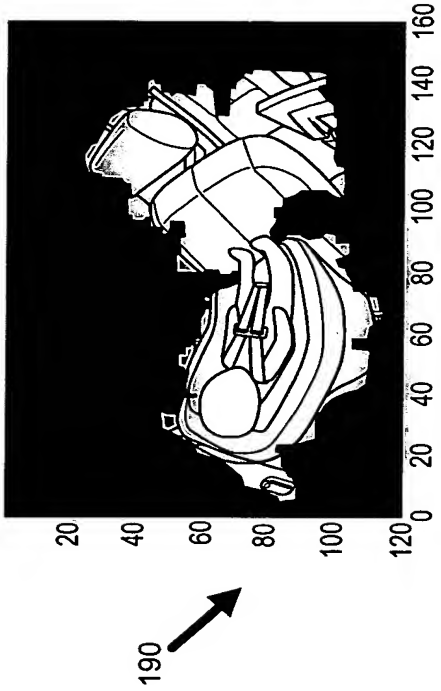
190
0
20
40
60
80
100
120
140
160
20
40
60
80
100
120

FIG. 12

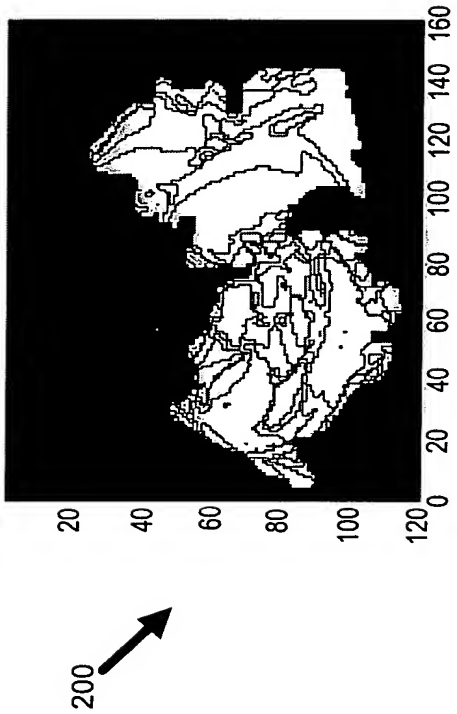
0
20
40
60
80
100
120
140
160
20
40
60
80
100
120
200

FIG. 13

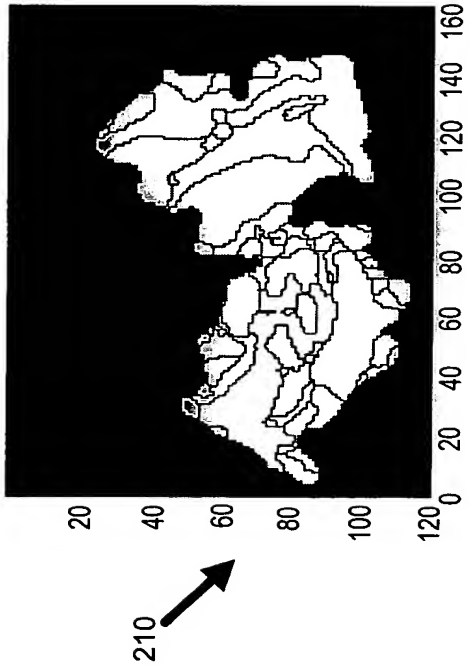
0
20
40
60
80
100
120
140
160
20
40
60
80
100
120
210

FIG. 14

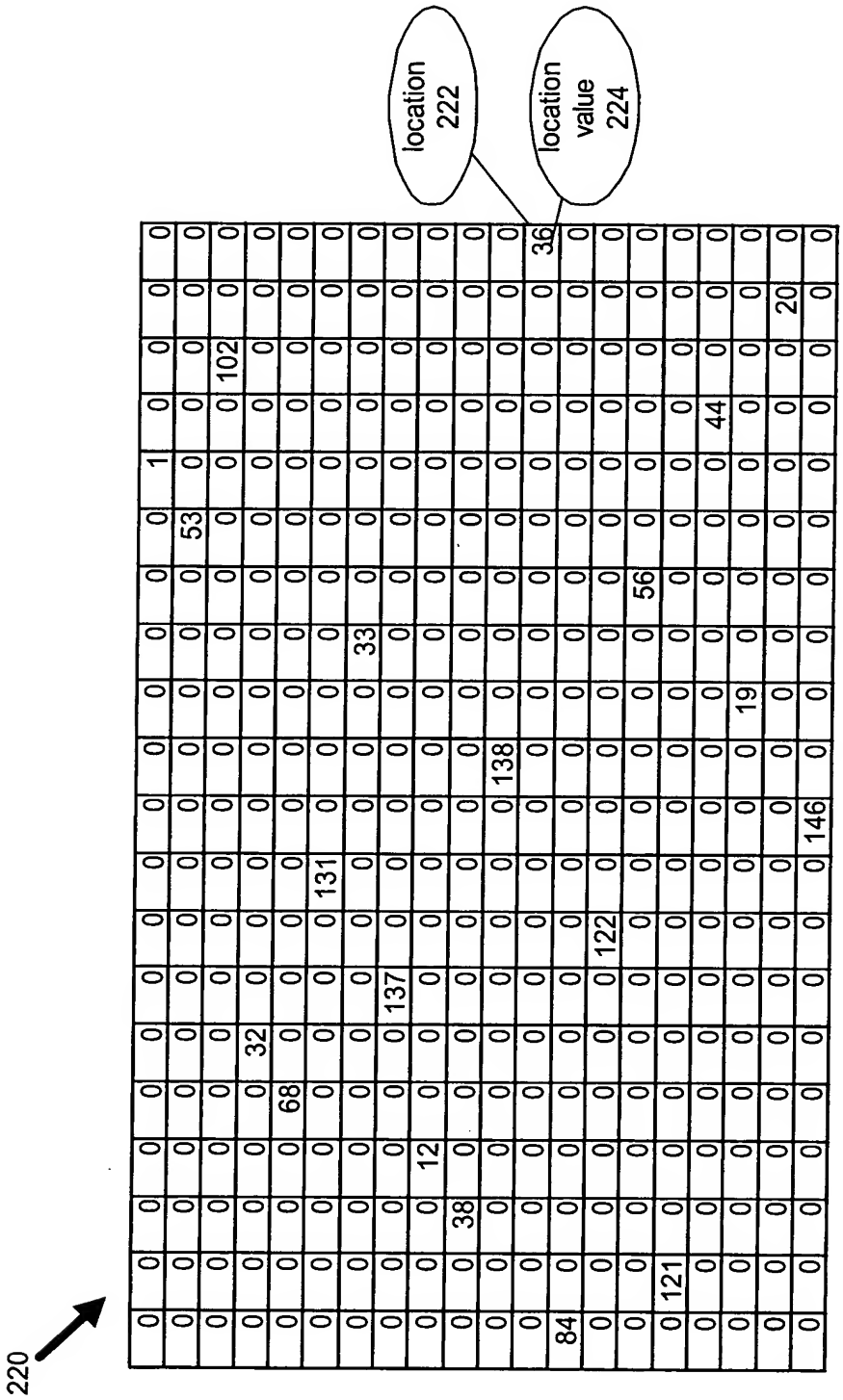

FIG. 15

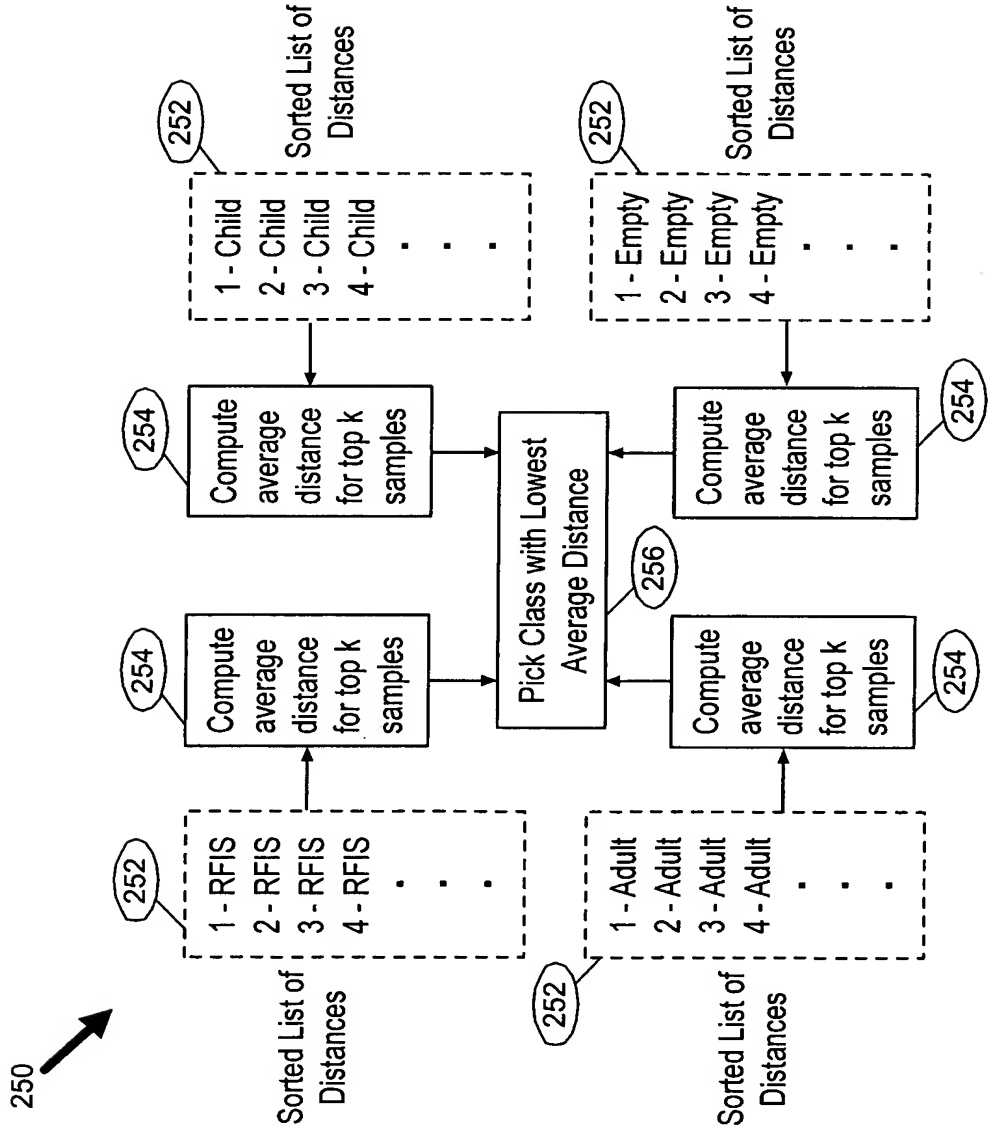
250
252
1 - RFIS
2 - RFIS
3 - RFIS
4 - RFIS
Sorted List of Distances
254
Compute average distance for top k samples
252
1 - Child
2 - Child
3 - Child
4 - Child
Sorted List of Distances
254
Compute average distance for top k samples
256
Pick Class with Lowest Average Distance
252
1 - Adult
2 - Adult
3 - Adult
4 - Adult
Sorted List of Distances
254
Compute average distance for top k samples
252
1 - Empty
2 - Empty
3 - Empty
4 - Empty
Sorted List of Distances
254
Compute average distance for top k samples

FIG. 16

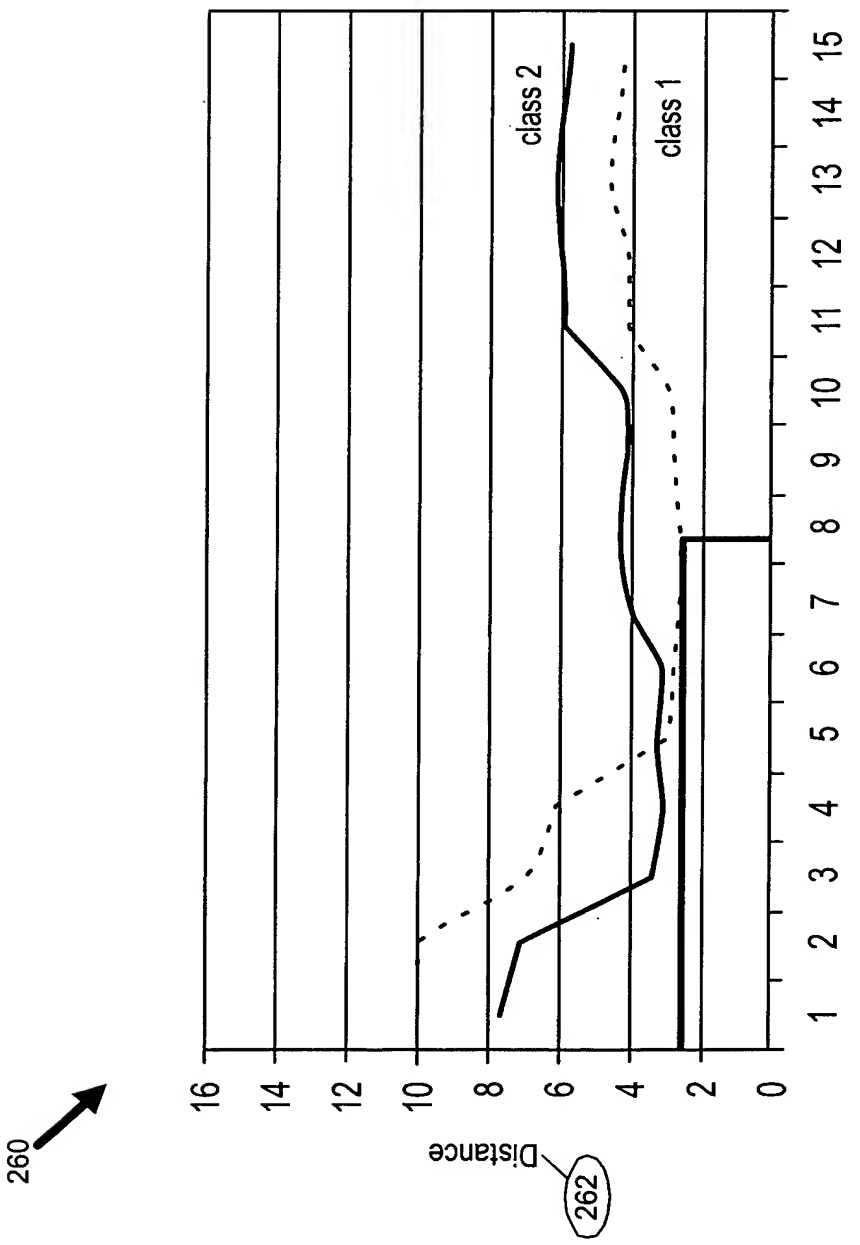
260
Distance
262
16
14
12
10
8
6
4
2
0
class 2
class 1
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
Region Sequence ID
264

FIG. 17